UNIVERSITY OF
GEORGIA

Franklin College of
Arts and Sciences

Department of Statistics

GA Statistics Day 2026

Featuring Shan Ba
Data Science Applied Scientist
at LinkedIn

Lunch Lecture:

From Classical DOE to Online Experimentation at Scale: Challenges, Lessons, and Opportunities

Abstract:
Controlled experiments are widely regarded as the gold standard for establishing causal relationships and guiding decision-making. While the core principles of Design of Experiments (DOE) remain fundamental, applying them at the scale of modern online platforms introduces new challenges and opportunities. This lunch lecture provides an overview of online experimentation and how technology companies use online controlled experiments and large-scale A/B testing to evaluate products, algorithms, and business decisions. We will discuss common use cases, compare online experimentation with classical DOE, and examine practical challenges that arise in real-world settings, including interference (violations of the SUTVA assumption), metric design, data quality, and decision-making under uncertainty. Along the way, I will share lessons learned from deploying experimentation systems at scale and discuss emerging opportunities for statisticians and data scientists in this rapidly evolving field.

4:30pm Seminar:

Advanced Experimentation in Online Marketplaces and Recommender Systems

Abstract:
Online platforms increasingly rely on controlled experiments to evaluate product changes, but standard A/B testing often struggles with interference, competition, and shared resources. This talk presents two advances in experimentation for large-scale online platforms. First, we introduce methodological improvements to Budget-Split Testing (BST) for online advertising, including a Robust BST framework that removes partition-related bias while maintaining accurate causal measurement. Second, we present a principled framework for producer-side experimentation in recommender systems, based on counterfactual interleaving, that enables reliable evaluation of ranking models despite shared recommendation lists. Together, these methods address key challenges in causal inference for modern marketplaces and recommender systems.

Bio:
Dr. Shan Ba is a Data Science Applied Scientist at LinkedIn. He works on online experimentation, causal inference, and statistical methodologies for large-scale decision making in AI-driven online marketplaces. He also serves as Chair of the Quality & Productivity Section of the American Statistical Association (ASA) and as an Associate Editor of Technometrics. He holds a Ph.D. in Industrial Engineering (Statistics) from the Georgia Institute of Technology and an MBA from the University of Chicago Booth School of Business.